Information and Technology Services
ANNUAL REPORT
2021 - 2022

Luther College

This annual report was published January 2023, and was written by staff of Luther College Information Technology Services (ITS). It is the synthesis of many individual and team reports covering work completed during the 2021-22 academic year. Project work is mapped to our guiding principles for investment. Work that reflects our ongoing initiatives in support of the mission of ITS and the College is included in our team reports.

For more information about Luther College Information Technology Services, visit www.luther.edu/offices/its

Vision

The following principles help us to consider the services that meet the mission of the college and how we go about deploying the resources that allow us to adapt to an environment of continual technological change. These principles also inform our decision making and help us to carefully allocate limited resources. As technology continues to evolve, our focus on, and approach to, a particular principle might vary from year to year.

1) Improves Teaching and Learning Outcomes for Faculty and Students

With each discussion of a new service, process improvement, or project we need to think about how it enables and supports improved teaching and learning for faculty and students. Our success is a reflection of the successful transformational journey our students experience at Luther College. In our efforts we need to consider how we contribute to student retention, improved graduation rates and students' transition to their first "next step" after they graduate. Besides providing basic essential services, we endeavor to bring our campus community innovative technologies such as the Digital Media Center which enables students to develop advanced forms of video communication and the Makerspace which helps students to visualize the world in new ways through virtual reality experiences and 3D object development. Ensuring that faculty have the appropriate technological classroom resources is essential to the success of these efforts and facilitates the creation and nurturing of learning communities. Teaching our campus community how to use the resources we make available is essential.

2) Provides students exposure to and hands-on experience with the technologies they will use both at the college and in their pursuit of lifelong learning

There continues to be a heightened level of concern about students' success in whatever post-college experience they may choose to pursue whether it be a job, a service program, graduate studies or other endeavor. Whatever that choice might be, we want to make sure we think about what will help make our graduates differentiated and successful in achieving their desired next step. We do this when we have facilitated teaching and learning through the technological tools we provide that will lead to additional skills and hands-on experiences that make a difference in their pursuit of those. We seek to make available the tools necessary for our faculty to provide learning experiences that our students can leverage to differentiate themselves and continue the journey of "lifelong learning." Within ITS we need to evaluate each new service, process improvement, or project with an eye towards how it increases the likelihood that students and parents will select Luther College. We strive to meet and exceed expectations in service levels of essential services and hope to have had a positive impact on graduates' success attributable to the efforts of ITS.

3) Provide reliable, effective, and efficient information technology infrastructure for Luther College

We are charged with providing essential information technology infrastructure which will support and enable the processes of delivering higher education at Luther College. An additional major factor in our planning and decisions is the fact that the student population is almost entirely residential and the services they expect in their living environment are often based on what they experienced in their home. There are many interdependencies

that require a concurrent focus on security, high reliability, ubiquitous availability, and excellent performance. The ability to provide 24/7/365 system accessibility is essential. New and alternative site-based or cloud-based architectures in networks, systems and services provide us choices but it also complicates decision-making. Staying ahead of aging and obsolete hardware and software is an ongoing effort. Additionally, business continuity and disaster recovery are critical elements that need to be embedded in our planning process.

4) Provide technical support to offices with the collection and transformation of 'data' into 'information' that leads to timely and effective decision-making.

The many data collection systems we operate in coordination with our internal constituencies and our external vendors generates a significant amount of potentially useful data. It is imperative that information is collected in a manner so that it can be transformed into useful information. We need to make sure the data the college collects is relevant, timely, accurate and complete. Key components to accessing that data and transforming it into information are the reporting tools those various systems provide. ITS must assist the college community with those reporting tools in a manner that allows them to extract information in meaningful ways. We need to be in the forefront of providing expertise to our constituencies in the selection, implementation and ongoing maintenance of those systems.

Our Mission

Information Technology Services supports the work and mission of the Luther College community by providing:

- **access** to appropriate communication and information resources,
- **expertise and training** in the effective and efficient use of information and technology, and
- **places** to explore and express ideas, ourselves, and our community.

ITS Team Reports

At the conclusion of the 2021 - 22 academic year, the Information Technology Services (ITS) team included:

- Dennis Blake (Telephone and Network Technician - Contracted)
- Dustin Cote (Programmer Analyst and Database Administrator)
- Eric Ellingsen (Telecom and Program Support Coordinator)
- Robert Erickson (Classroom and Meeting Space Technology Lead)
- Adam Forsyth (Director of Network and Systems)
- Faust Gertz (Programmer Analyst)
- Diane Gossman (Executive Director of Information Technology Services)
- Marcia Gullickson (Director of Enterprise Applications)
- Matthew Hammen (Information Security Analyst and Systems Administrator)
- Aaron Harris (Workstation Support Specialist)
- Matt Hughes (Workstation Support Communications Administrator)
- Alex Schlesinger (Multimedia Strategic Fellow)
- Jesse Mulert (Technology Help Desk Co-Lead)
- Jay Raabe (Multimedia Lead)
- Jean Ryan (Programmer Analyst and Database Administrator)
- Lane Schwarz (Systems administrator and Technical Support Analyst)
- Aaron TerBeest (Workstation Support Specialist)
- Chris Stuckman (Systems Administrator)
- Paul Vanney (Programmer Analyst)
- Erin Zidlicky (Technology Help Desk Co-Lead)

Software Development

In 2021-22, the software development team focused on many security initiatives including adding single sign-on to Norse Hub and many auxiliary systems, upgrades to operating systems, securing file transfer processes, and software upgrades.

Our internal student information system and many of our vendor supported systems (for course evaluations, dining services, document imaging, emergency communications) were upgraded to newer operating systems or the software infrastructure was moved to the cloud. The document imaging system upgrade gained us functional efficiencies, web scanning, and expanded usage in Financial Aid, Student Engagement, and expanded use of digitized invoicing approvals in more departments. The emergency communication system was expanded to be used for parent, staff, and student announcements, eliminating maintenance of email groups and lists.

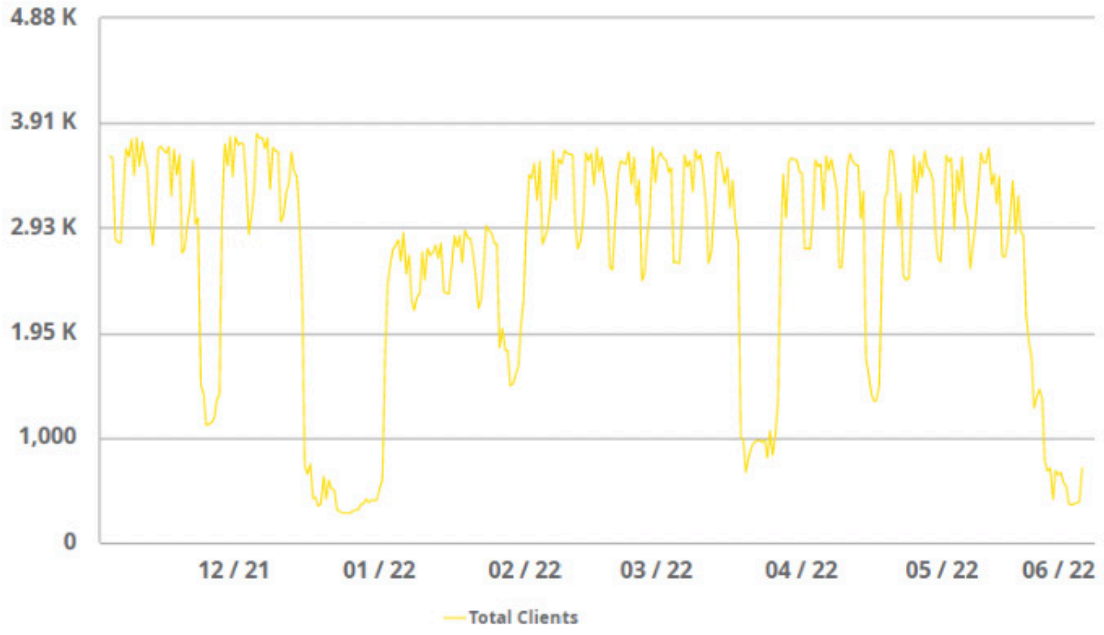
Many Colleague data exports, mapping and data manipulation processes were developed and continue to be created to populate data in Slate Advance for the implementation and usage for event registrations and giving portals.

Ten new software as a service solutions were requested, evaluated for risk, reviewed, and vetted with stakeholders over the year. New solutions were purchased for curriculum management and publishing the course catalog, for career center, human resources talent management, global learning, student success in TRIO, athletic training, counseling. ITS assisted in contract review for consulting services for the content management system project and several software acquisitions. The new course catalog solution provided an opportunity to install, set up and configure Ellucian's ETHOS middleware for streamlined data exchange with Colleague course information.

Our team assisted Health Services in discontinuing use of Medicat with the transition to Winneshiek Medical Center, and the IVY campus clear solution for Covid-19, and HigherTouch for human resources employee applications.

We assisted in prioritizing projects in support of process improvement and implementation of ideas in many departments including online benefits enrollment. We updated the process and communication for chosen names for employees and students. Our team is continually creating new reports and enhancing existing reports in addition to training and support on new software acquisitions and data exchanges with auxiliary systems.

Network & Systems

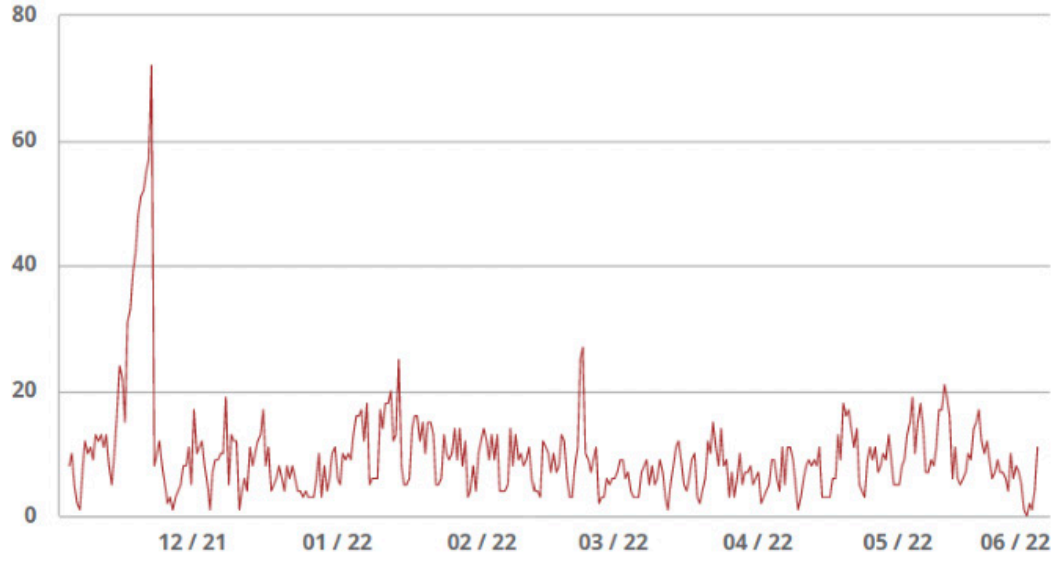


Wireless Network Stats

For the 2021-2022 school year, we see the maximum number of devices simultaneously connected to our wireless network peaks around 3800. This compares to peak connections of around 2100 during the 2020-2021 school year.

VPN Usage Stats

The following chart shows the number of simultaneous clients using our ViaVPN system from 6/1/2021 to 5/31/2022. It reflects a return to more normal work patterns of working mostly from campus, no longer from home.



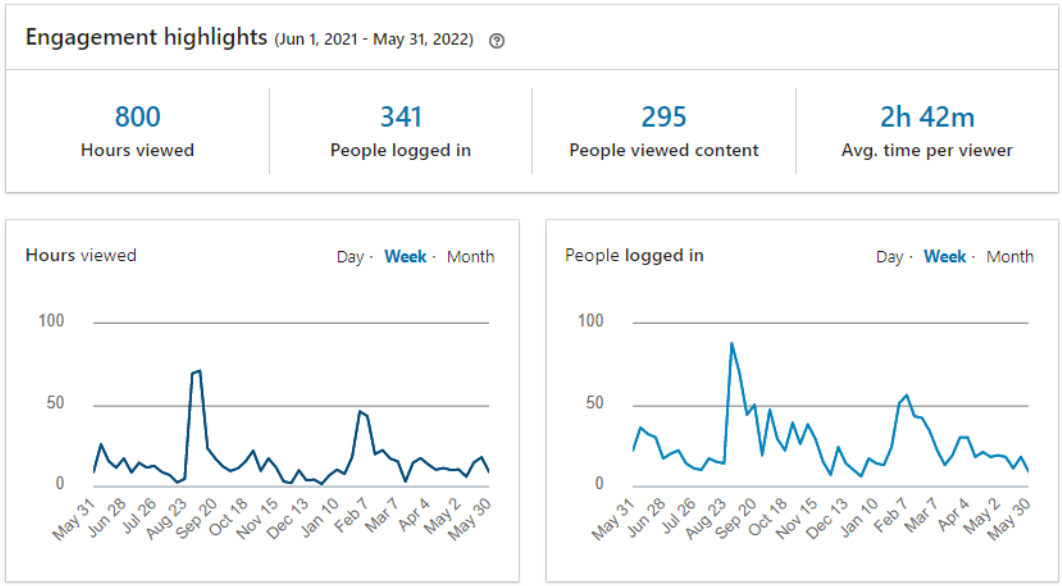
In summer 2021 new wireless access points and new network switches were installed in Baker Village.

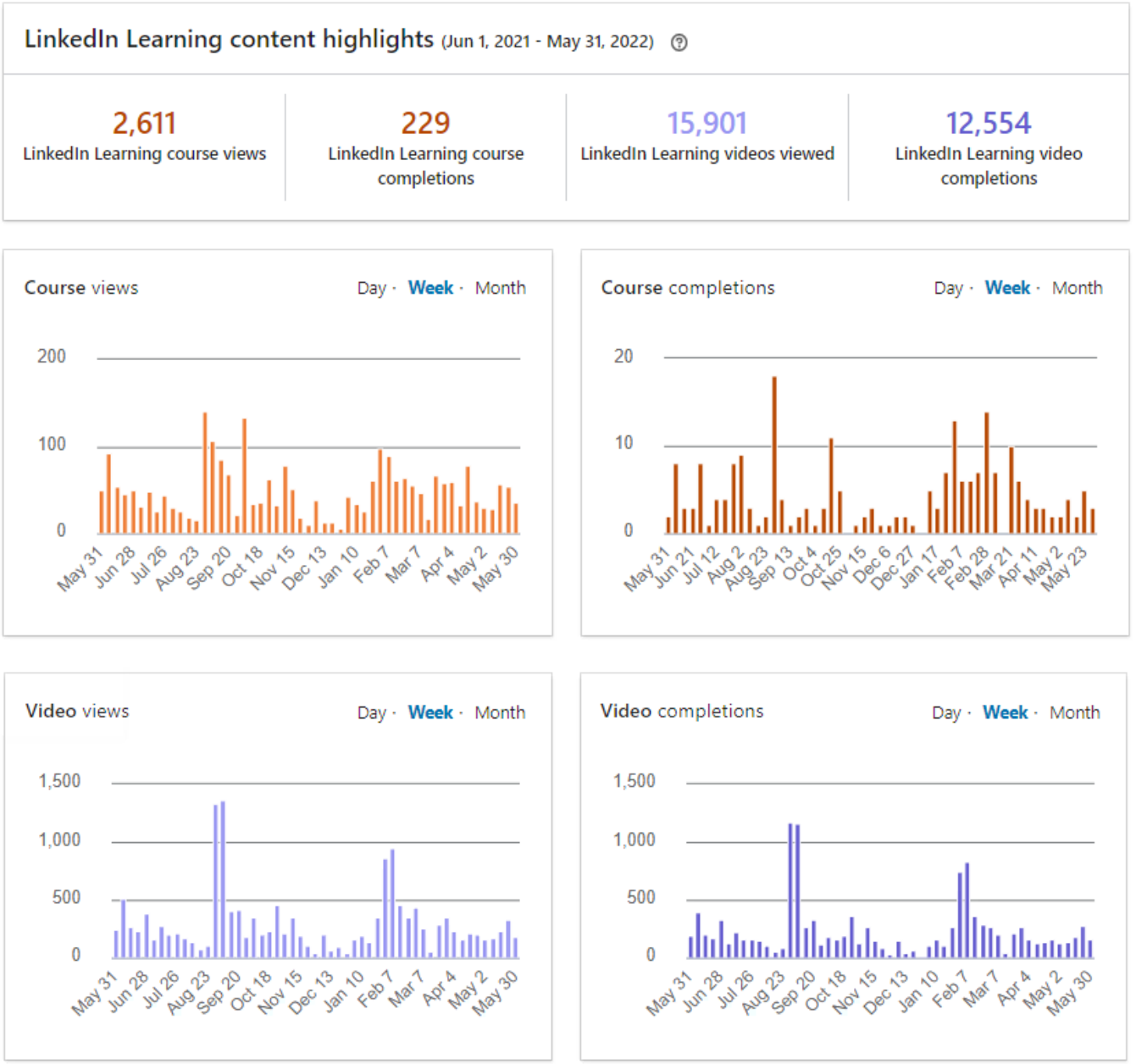
Many changes were focused on improving information security.

- Automated patching for our windows servers was implemented.
- Duo was installed on windows servers making MFA authentication now required for our system administrators to connect to these systems.
- Windows servers were joined to the domain in order to leverage Group Policy.
- Our campus firewalls were upgraded with newer more powerful models.
- We've purchased Nessus and use it to scan for known vulnerabilities on a weekly basis.

Training Summary

The following charts show the usage of LinkedIn Learning, web-based software training videos and resources, from June 1, 2021 to May 31, 2022. Faculty, staff, and students interested in using the software may login to linkedinlearning.luther.edu with their Luther credentials.





Workstation Support - Classrooms and Labs

New Windows workstations were installed in the Digital Media Center, Main 114, and Valders 350. The computers previously in these spaces were then used to upgrade various other computer classrooms, labs, and podiums on campus. The Biology laptop pool was upgraded. Athletics began using our fleet of Dell Venue tablets to access their Teambuildr app.

Macs were removed from labs in Koren and the Union. Two iMacs remain in the Library.

All remaining Mac podiums on campus were replaced with Windows workstations for ease of updating and maintenance. In addition, public access computers (typically older iMacs) were removed from campus except in the Library where a handful remain for community patrons. This change was made due to the number of personally-owned mobile devices which negated the need for widespread public access computers.

Workstation Support - Faculty

New computers were purchased for faculty and staff this year. During the summer of 2021, workstations were upgraded for faculty in the Divisions of Music and Nursing, as we continue our move to a staggered replacement cycle with 1/4th of the Luther faculty receiving refreshed workstations each summer. All other faculty Windows workstations received a Feature Update.

Starting in January 2022, new M1 MacBook Airs were rolled out to Faculty in the Music and Nursing departments. These machines represent the first new Mac workstations since ITS began 'supercharging' several years ago. The new Macs are running macOS Monterey.

Mosyle Mobile Device Management (MDM) was fully implemented for managing Macs. This has allowed us better control over settings and management of Macs, as well to be better prepared for upcoming feature changes in macOS.

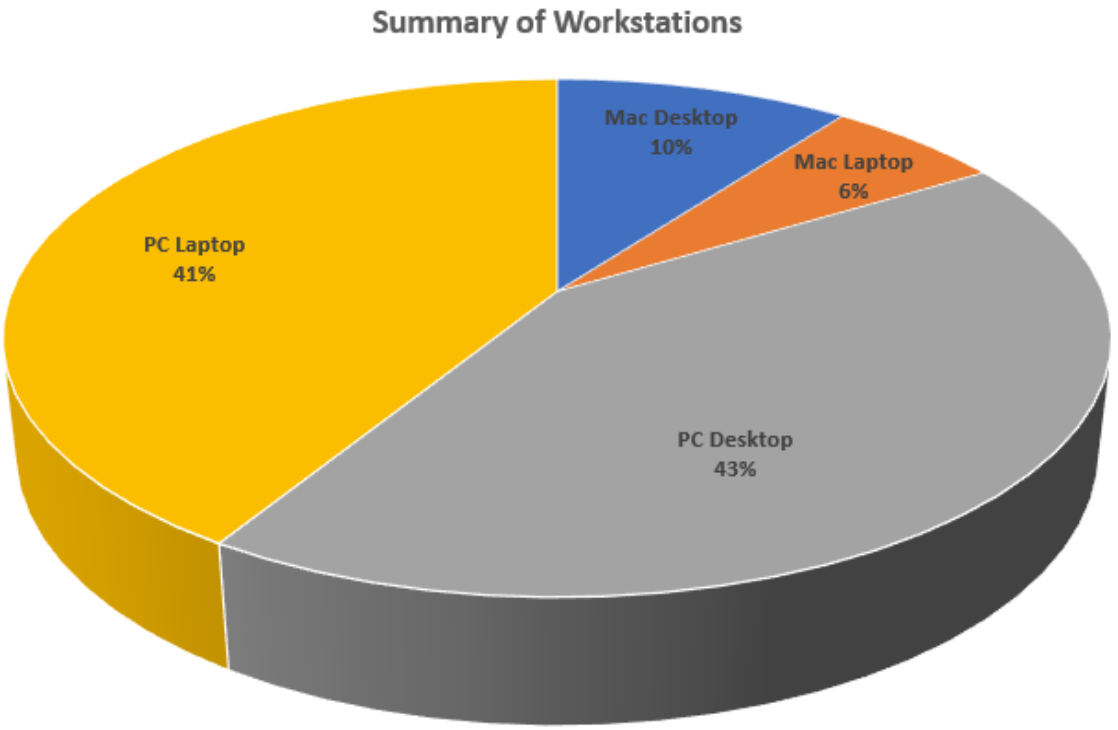
Workstation Support - Staff

Beginning with the 2010-11 academic year, staff computer upgrades are now on a staggered 3-year cycle. The departments are divided into thirds, and every year one third of all staff computers are refreshed. This cycle is manageable for most needs and maximizes our hardware investments. Departments receiving a refresh included: Alumni & Development, Campus Programming, Campus Security, CAE, Career Center, Facilities, Financial Aid, and Registrar's Office. All other staff Windows workstations received a Feature Update.

Starting in January 2022, new M1 MacBook Airs were rolled out to Staff in scheduled departments. These machines represent the first new Mac workstations since ITS began 'supercharging' several years ago. The new Macs are running macOS Monterey.

Mosyle Mobile Device Management (MDM) was fully implemented for managing Macs. This has allowed us better control over settings and management of Macs, as well to be better prepared for upcoming feature changes in macOS.

Workstations on Campus



Count of Asset Id	Column Labels				
Row Labels	Mac Desktop	Mac Laptop	PC Desktop	PC Laptop	Grand Total
Acad	19	36	54	153	262
Admin	45	46	168	282	541
ITS	3	2		3	8
Kiosk	25				25
Lab	56	9	323	170	558
Podium	5		72	2	79
Research	2		28	16	46
Grand Total	**155**	**93**	**645**	**626**	**1519**

Classrooms and Meeting Spaces Audio-Visual Support

Classrooms and Meeting Spaces Audio-Visual Support designed and installed the Olin 202 technology project which included a new audio system, projection equipment, larger screen, and digital podium rack equipment for switching sources while enabling higher resolutions. In addition, the team:

- Participated in the remodeling of Valders 252 and 254 classrooms into the new nursing simulation lab.
- Replaced the analog user control system in Hovde Room with a new digital unit.
- Installed a new digital AV room system in the Jenson-Noble Choir room which included speakers, projection and a control system.
- Repaired high end projectors in the Loyalty Boardroom and Olin 102 hall due to power outages.
- Designed and installed Video Conferencing systems for the purpose of classroom usage in Main 111, 112 and Hovde Room.
- Sourced projector lamps during the pandemic supply chain problems.
- Upgraded the projection system in the CFA conference room.
- Rebuilt the podium rack equipment in Baker Commons to solve an audio problem with the 98 inch TV.

Digital Media Center

The Digital Media Center is located on the lower floor of Preus Library. Luther faculty, staff, and students are welcome to use the multimedia lab and multimedia studio. The lab is available for use whenever the library is open; the studio is available by appointment.

Fall 2021 Highlights

- Support for Homecoming was hybrid, including current and make-up events for those missed in past years during COVID. Events ran through most of October, allowing for 3 full weekends of reunions and current Homecoming events.
- Many events, such as distinguished speaking events and Board of Regents events were supported by Multimedia as hybrid Zoom events, allowing for remote and in-person attendance.

Spring 2022 Highlights

- New Windows workstations were installed in the Digital Media Center in January 2022, replacing the iMacs.
- Multiple departments: Theater, English, and Sustainability requested training sessions in the Digital Media Center to train for workflow and techniques in podcasting. Continued individual support provided by the Multimedia technician team on a one-to-one basis.

- Installation of Vaddio video conferencing systems in Main 111 and 112 and Hovde Room for classroom required staff and faculty training and working with CELT to further promote awareness and develop techniques for the multi-camera classroom and video conference.
- Livestream support provided across campus in: Center for Faith and Life, CFL Recital Hall, Oneota Market, Olin 102, and Zoom Webinars for guest lectures and events.
- Infographic, Canva, and Illustrator training provided to the Spanish department, followed by Digital Media Center technician support on a one-to-one basis.
- Multi-camera set-up developed with Visual Communications department to provide TV studio experience and assignments in the Digital Media Center studio.
- Livestream for the Nursing department's Ironside guest lecture resulted in a complex audio/visual livestream from the Peace Dining room.
- Commencement ceremony was live streamed from Carlson Stadium.
- Four ROAD sessions were planned in collaboration with Admissions, the Registrar, Student Success, and advisors for a complete Zoom registration and advising experience. 400+ incoming students were registered on Zoom in these events.

Notes
- The majority of tickets submitted are completed within 1-2 days. Tickets that remain in the Multimedia queue represent a number of long-term equipment loans and a ticket is a record of this loan.
- Multimedia sees a spike of ticket activity at the beginning of each term (see: September & February) to adapt or upgrade technology for curricular activities.

DMC KBOX Traffic Synopsis

Total Tickets	584
Total Tickets Closed	580
Total Edits	1946
Total Comments	1403
Average Total Working Time	21.56584521
Median Total Working Time	6.10125
Average Satisfaction Rating	4.973684211

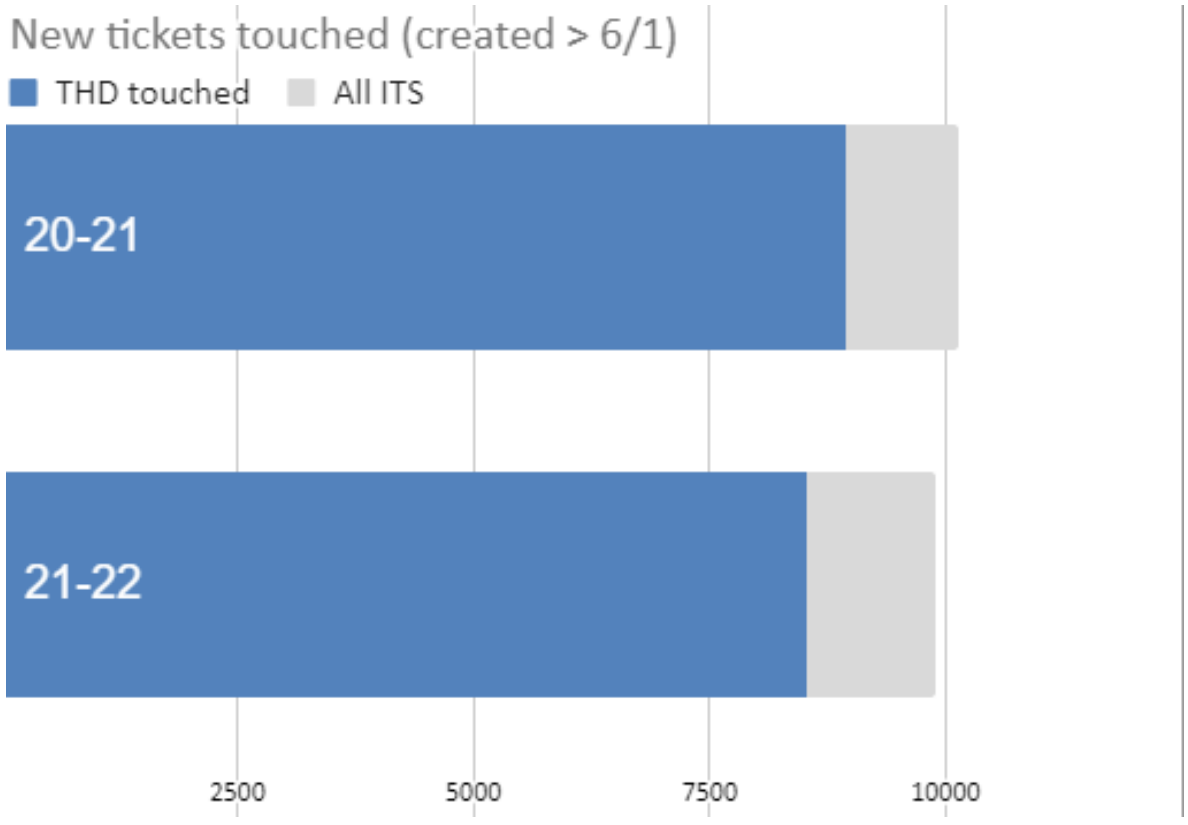
Technology Help Desk

The Technology Help Desk is where the Luther community and visitors most commonly start seeking help from ITS. Every day, the Technology Help Desk student technicians and professional staff accept issues ranging from basic device use to in-depth training, from bug report to system outage.

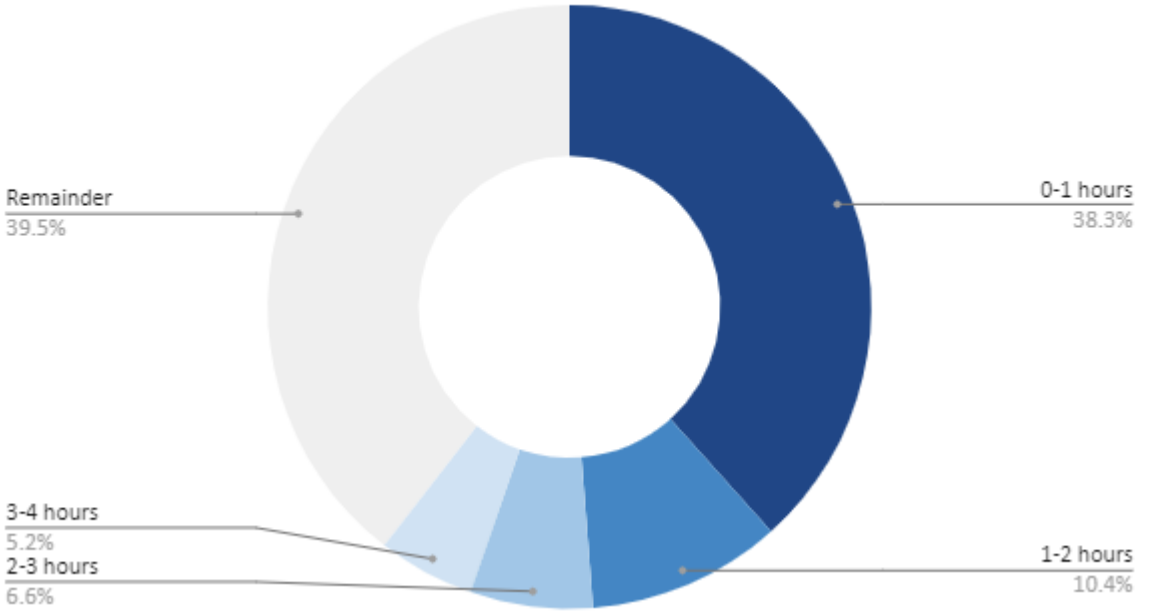
Between June 1 2021 and May 31 2022, the Technology Help Desk team touched 8865 of the 10739 tickets touched by ITS as a whole (83%). ITS as a whole touched 0% fewer tickets than the year before and the Technology Help Desk touched 2% fewer tickets.

While overall touches is a good indicator of work performed, new tickets better represent the current demand for services. If we only consider those tickets created after June 1, then the Technology Help Desk touched 8536 of the 9884 tickets (86%). Compared to the prior year, the Technology Help Desk touched 4% fewer tickets.

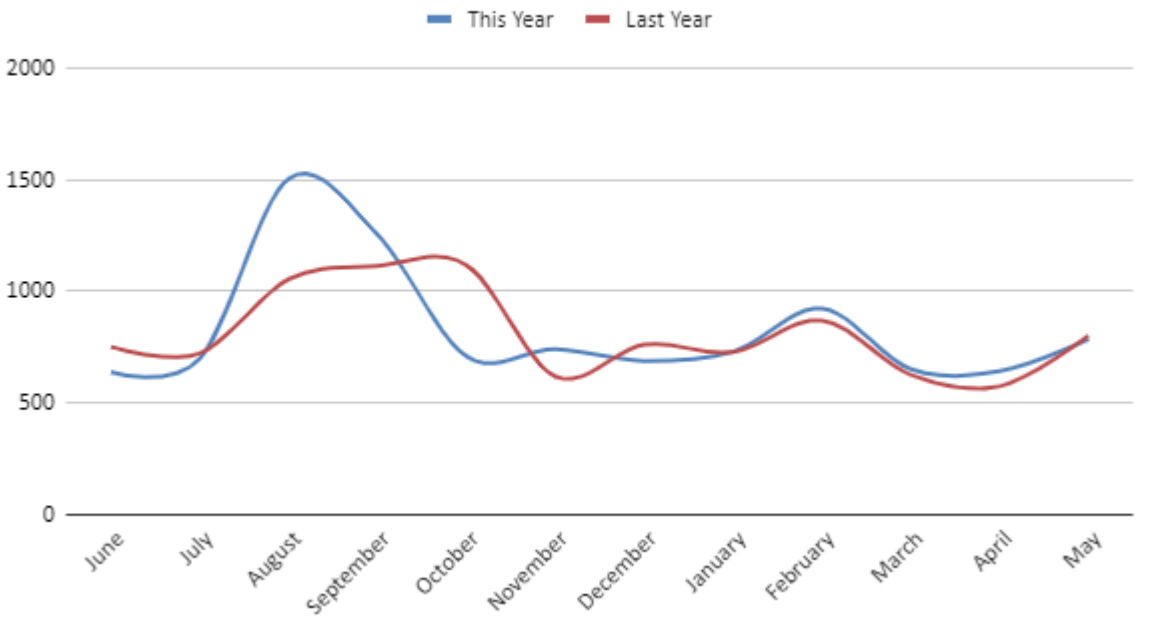
Of those tickets, 23% were resolved on first contact, they took 18 hours to resolve on average (median of 2.2 hours), and our average satisfaction rating was 4.9 out of 5, compared with 4.86 the year before.



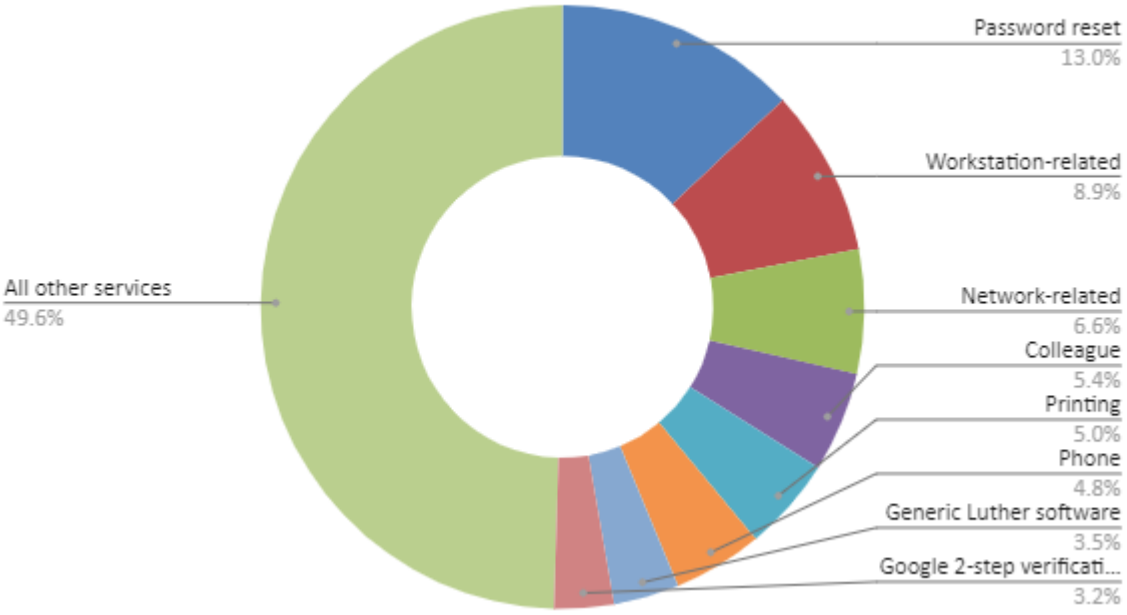
Time to close



Tickets per month



Top THD services



Information Technology Services
Preus Library
700 College Drive
Decorah, IA 52101
Tel: 563-387-1000
E: helpdesk@luther.edu